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AMERICAN VETERINARY REVIEW,

NOVEMBER, 1886.

EDITORIAL.

VETERINARY COLLEGES—their opening—classes larger than usual—more requirements asked of the students—more thorough education, and why—the reason given by the *National Live Stock Journal*—more expert knowledge wanted—the medical profession crowded—physicians ought to perfect their studies in comparative medicine, but not from the books alone. CONTAGIOUS PLEURO-PNEUMONIA in the West—its outbreak in Illinois—difficulties encountered in the work of stamping it out—the laws imperfect—conflicts all over—Dr. Gadsden's appointment—his letter on the disease—the objection from *Turf, Field and Farm*—singular experimentation and more singular conclusions—are recovered cases, so called, dangerous or not?—important extract from the report of Chief Veterinary Inspector C. Stephenson, M.R.C.V.S. MEETINGS OF VETERINARIANS IN CHICAGO—a new organization—the profession will be glad to hear from it. MASSACHUSETTS—she keeps on watching for contagious diseases—the order of the State Cattle Commission—declaration or giving notice, the principal measure of veterinary sanitary police. VETERINARY COLLEGES OF ENGLAND—recognition awarded to American graduates—admission granted without examination and with privileges of two years' studies—Dr. Mitchell, the prize graduate of the class of 1884-85 of the American Veterinary College, goes to Edinburgh for a post graduate course. THE NEW YORK STATE VETERINARY SOCIETY—alterations in the by-laws—meetings changed from monthly to quarterly—why—is the society moribund—if dying she will leave a good record in the law in New York regulating veterinary practice. CANINE MASTOIDITIS—interesting and instructive paper by Dr. G. Stockwell—one of the most complete papers on the subject ever written. JOURNAL OF COMPARATIVE MEDICINE—changes in.

VETERINARY COLLEGES.—The month of October again witnesses the advent of the working season in the veterinary colleges, and students and teachers are once more in harness and “tackled up” for their respective tasks. The classes have been formed, and the selections of their *alma maters* have been made by the students.

Their choice in this important step has of course been guided by a variety of considerations. With one the argument of "low fees," with the unpleasant exigencies to be inferred from that phrase, has been potent. Another has found a ruling motive in the prospect of a shorter term of study, with the flattering anticipation of an earlier realization of successful practice at the end of the curriculum. With another, neither the low fee nor the easy and early graduation argument has been potent, and he has joined himself to the institution in which in his judgment he can be best taught and trained for the honorable and useful pursuit he has chosen.

The general outlook is favorable for the schools, and therefore for the students, and we may reasonably anticipate a good, perhaps an exceptionally good record when a review shall be in order at the close of the year. As a general result thus far, we are justified in reporting good classes in all, larger classes than in previous years, and this ought to mean a better professional education, as the fruit of more earnest endeavors by the teachers to impart and the learners to acquire fuller knowledge. The time has gone by where a limited—often a minimum—stock of knowledge satisfied the ambition of the student and the conscience of the teacher. The graduate of twenty, fifteen and even ten years ago, unless he has kept himself well posted and has been careful to avoid becoming rusty, might, if again passing through the green room, find that the examination had become more faithful and the questions harder and more comprehensive and more of them than he can recall from his past experience, and if it should occur to him to inquire into the matter with a view to the discovery of the reason of the change, he would probably find his answer furnished ready to hand in the words employed as the heading of an editorial article, from which we make some extracts, in the *National Live Stock Journal*, which reads, "MORE EXPERT KNOWLEDGE NEEDED." It is clearly to comply with this requirement that the demand comes from the public that our young veterinarians should seek more and receive a better educational training. Twenty years ago, when veterinary colleges began to be organized, the public was unprepared for the requirements now looked for, and the

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profession was, if not quite ignored, at least denied a place among learned and responsible callings. But all this is changed, we need not say for the better. The *Live Stock Journal* in the editorial referred to says:

For every half dozen establishments where horses are bred for speed, there should be an educated and in every way a competent surgeon, to pass upon the personnel of growing colts, selecting those that are formed to stand training, assigning others to work they were formed to endure. The ailments of body and limb in a lot of growing young stock, especially such as are under training, are liable to be numerous, and the highest skill is required to do justice to animals of value. The same truths apply to cattle. In the fitting of herds for exhibition or sale, it happens, unfortunately, that some of the most expensive and valuable in a herd are, in one fitting, under the direction of an owner and herdsman more ambitious than wise, stripped of their value for the want of a thorough review of their capabilities, and tendency toward unfortunate results while fitting. A competent veterinary surgeon could pass judgment upon the tendency of females, as to whether this would be toward abortion, upon feeding up to the show limit. A great deal of blundering is done in feeding up, and especially by continuing the fatted state during the year. The physiological effects of this are not sufficiently understood by owners and herdsmen, hence, for this reason, skilled aid should be more generally available than now.

How wisely this reads, and what force of argument dwells in these words, which remind the public of truths which have been too long ignored, and which even now may not carry the weight to which they are entitled, we need not say. But is the proposition contained in the same article, suggesting the best method of securing the end in view, viz., "more expert knowledge," well conceived or practicable?

The provision for treating human ailments is altogether beyond the requirements. Perhaps there is no calling more completely overcrowded. But with vast sums invested in live stock, there are but a meagre number of those who are prepared to diagnose the ailments of domestic animals and treat them intelligently. If one-third of the graduates of medicine now before the public would add the leading veterinary works to their libraries, looking up the anatomy of the horse and cow—this would be a very simple task, because the tissues are the same, and named in the one case as in the other, the muscles being in pairs as in the human subject, and named after them—apply their physiology, the doctrine of digestion, circulation, generation, pathology and the use and action of remedies, as they have learned these things in what would naturally be called the *higher school*,* they would find a field before them to a great extent unoccupied, certainly not crowded. The graduate in human medicine would have at once a position accorded to him in the new field, while, in the present state of things, the opportunities for preferment, considering the extent of the competition, are meagre indeed.

* Italics are ours.

We have great respect for the authority of the *Journal*, one of our best live stock publications, but we feel quite justified by a long experience in saying that it is not out of human physicians that veterinary experts can be made, or that they may be converted into expert veterinarians by merely adding "leading veterinary works" to their libraries. The human as well as the veterinary physician may in the general principles of medical science have received a first-class professional education, but there are great differences between the two, and each requires its special teaching and special drilling before the qualifications of an *expert* can be mastered by either.

And the correctness of these statements has been often and undoubtedly proved by the existence and the various outbreaks of pleuro pneumonia which have disturbed our agricultural community for the last few months. Pleuro-pneumonia contagiosa is very readily recognised at the post mortem, but ask the young graduate who has seen but few cases of the disease, and whose skill in auscultation and percussion are still deficient, if he has encountered no difficulties of diagnosis, of treatment and of prognosis, and experienced no disappointments in results, in confronting his living cases, and note what his answer, if honestly given, will be. If such is the case with him, what must it be with the man whose skill is exclusively acquired by the study of the "leading books," even the best. No. If physicians want to practice veterinary medicine let them secure the proper veterinary education. They may then help to fill out the ranks of the veterinarians, which certainly are far from being thronged and not at all likely soon to be overcrowded.

CONTAGIOUS PLEURO-PNEUMONIA.—Western agricultural papers are full of interesting articles on the subject of contagious pleuro-pneumonia, and the last outbreak at Chicago at the Union Stock Yards is a circumstance not by any means likely to quiet the anxiety which has been excited. The *Breeders' Gazette* says that "things will culminate in time, but the pleuro-pneumonia business in this city (Chicago) seems very slow about coming to a head." Patience must be cultivated; it is always in order. Doubtless there are many obstacles in the way. "Prompt and resolute

measures" have not been enforced from the start. Legislative action has interfered with the work of stamping out. The appraisement of losses, which is the principal agent of success, has been unsatisfactory. The capital required, the money granted to carry it on has not been sufficiently available, and while the entire staff of the Bureau of Animal Industry, with Dr. E. Salmon at its head, is hard at work, we can easily understand that the progress is slow. It is not yet time to find fault, and if it comes, and the fault is located, we are sure it will not be chargeable to neglect, carelessness or ignorance on the part of the veterinarians.

A valuable acquisition has been secured by the stock yards officials in obtaining the services of our friend, Dr. Gadsden. We have received a communication from him which we print in this number, which gives a very correct idea of the sort of advice he is likely to give in the stamping out of the disease.

Speaking of Dr. Gadsden's article, the veterinary editor of *Turf, Field and Farm*, referring to it, says:

Dr. Gadsden, of Philadelphia, a prominent veterinarian, sends us for publication an article contributed by himself to the Philadelphia *Practical Farmer*, of October 16 inst., which we regret we have not the space to print. The article bristles with strong points, and is well worth reading. We must, however, take exception to the statement that there is such great and imminent danger to be anticipated from what he is pleased to denominate "so-called cured cases" being allowed to mingle with healthy herds, notwithstanding he gives as his experience that this has in the past been the means of spreading the malady, and cites a number of strong names in the support of his theory. We are well aware that people, especially professionals, are prone to jump to conclusions arrived at without a proper consideration of the subject in question, and with all respect to the Doctor and his supporters, we believe this to be a case of that kind. What we would like to ask the Doctor and the gentlemen he refers to is, has he or they ever conducted a process of experimentation to establish the fact of the contagious nature of such cases, or does he arrive at his conclusion by some other process? There are so many avenues by which a contagious disease may be propagated and disseminated, that one may readily be mistaken for another. We experimented, as we believe, very carefully in this matter, to wit, destroyed "a so-called cured case" of two, four, and seven months standing, that is, after the normal functions had returned, and introduced a portion of the contents of each diseased lung into the system of twelve healthy bovines at different intervals and by different processes, without producing anything resembling contagious pleuro-pneumonia or its remotest symptoms. Prof. James Law also conducted a similar experimentation without, as we understand, any positive result.—*Vet. Ed.*

Therefore, in the estimation of the author of the article, the animals constituting the "*so-called cured cases*" of contagious pleuro-pneumonia are not dangerous, so far as the spreading of disease is concerned. And his opinion is based on, what? *On a process of experimentation, which, perhaps, was not carried out by the supporters of the contrary opinion, but BY HIMSELF.* We agree with him; evidently, his experiments were not followed by any processes *producing anything* resembling contagious pleuro-pneumonia, or its remotest symptoms. But a little careful thought must lead to the conclusion that these experiments were of no value in the inquiry presented. Too many evidences exist which seem to prove this dangerous condition of "recovered cases." The following case recorded by Mr. Clement Stephenson, F.R.C.V.S., proves the fact beyond a doubt.

VETERINARY REPORT FOR YEAR ENDING SEPTEMBER 30, 1885.

[COPY.]

To the Chairman and Gentlemen of the Executive Committee for Northumberland:

GENTLEMEN.—The work of the past year has been troublosome, disheartening and expensive. There have been six outbreaks of pleuro-pneumonia to contend with, in which a total of two hundred and five animals have been implicated.

The lot of cattle in which the disease first appeared was bought in April, 1884, and remained apparently healthy up to July in this year; the disease was then developed, and in so violent a form, that the first animal died on the seventh day. This rapid death, not usual in this disease, was explained by the post-mortem examination, which revealed the disease in two forms or stages, namely: recent acute disease, and old encysted cases. The latter had lain dormant for fifteen months. I have before pointed out the peculiarities and dangers of these old encysted cases, of which, during the year, I have found no less than nine, eight of which were in cattle brought from Ireland.

Encysted pleuro-pneumonia is found in those animals which from having been in infected herds, have contracted the disease, but in so light a form (only a small piece of the lung being affected) that apparent recovery has taken place; in fact, they may have been so slightly affected that little or no deviation from health may have been observed.

Lung tissue, when once invaded by this disease, never recovers its normal condition; it becomes enlarged, hardened, and impervious to air, and, in those apparent recoveries, the portion of lung affected is isolated and cut off from the remainder of the lung by a dense fibrous capsule, and it appears that so long as this imprisoned portion of dead lung remains firm and unbroken down, so long may the animal appear to be doing well. But the length of this, the firm quiescent stage, is as uncertain as the incubative one. A time comes when the im-

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prisoned piece of dead lung breaks up and liquifies, and then the active stage of the disease is re-started.

(Signed.)

CLEMENT STEPHENSON, F.R.C.V.S.

Chief Veterinary Inspector for Northumberland.

To conclude, we cannot help believing that such assertions as the one made by the well qualified veterinary editor of *Turf, Field and Farm*, are most unfortunate. There are already sufficient real difficulties in the way of the important work undertaken for the eradication of the disease from the country, without introducing others, without validity or value; which will not stand the test of careful inquiry; which have been proved erroneous, and which at best, if undoubtedly correct, would after all, simply save the lives of few poor old broken down animals, useless in life, and worthless even after death. We have no hesitation in saying, as was said at the fourth international meeting, that these animals ought to be destroyed. The destruction of affected and contaminated animals is an essential measure in the prosecution of a sanitary protective policy.

VETERINARIANS IN CHICAGO.—The agitation arising from the prevalence of contagious diseases in the West has already led to the organization of various associations, with kindred objects, relating to the same subject. These associations have already held meetings, and during the month of November will have a large gathering, pursuant to the following call:

LINCOLN, NEB., October, 1886.

DEAR SIR.—The second annual meeting of State, Territorial and Government Veterinarians, of Live Stock Sanitary Commissions and Boards of Health, representatives of Veterinary Colleges and Veterinary Associations, General Live Stock Agents of Railroads, and Editors of Live Stock and Agricultural Journals, will be held at the Grand Pacific Hotel, Chicago, Ill., November 15th, 16th and 17th, 1886.

Men of ability, eminent in their respective callings, will address the meeting on contagious animal diseases, the manner of their spread, and the means necessary to eradicate and control them, the necessity of adopting a uniform sanitary code by the various States, veterinary sanitary legislation, both State and National, veterinary sanitary medicine, transportation of live stock, etc.

Constitution and by-laws for a permanent organization are now being prepared and will be offered for adoption.

Delegates are expected to be present from every State and Territory in the

Union, and it is believed that this year's meeting will prove most interesting as well as profitable.

You are most respectfully urged to attend.

RUSH S. HUIDEKOPER, M.D., V.S.,
President.
Dean of Veterinary Dept., University of
Pa., Philadelphia, Pa.

J. GERTH, JR., D.V.S.,
Secretary.
Nebraska State Veterinarian,
Lincoln, Neb.
GEO. C. FAVILLE, B.V.M.,
Assistant Secretary.
Colorado State Veterinarian,
Fort Collins, Colo.

This organization was, we believe, organized last year, at one of the meetings of the Live Stock Association, and the work it must have prepared (?) or accomplished during the last twelve months, must undoubtedly be of interest to the veterinarians of the country generally. But besides the meeting of this organization, an invitation, emanating from the "Consolidated Cattle Growers' Association of America," to attend the meeting appointed to be held in Chicago on the 16th and 17th of November, has been extended to the veterinary organizations of the country at large. Taking in consideration the importance of the subjects which are to be treated and discussed, and the weighty interests of the veterinary profession which are involved, the work of these meetings will be anxiously anticipated and carefully scrutinized.

MASSACHUSETTS SANITARY MEASURES.—Massachusetts has for many years been free from that contagious disease of cattle which threatens our Western herds, and, at the same time, maintains a careful watch against others from which there is a possibility of danger to her stock animals. We print a communication in our present number, from the State Cattle Commission, which may wisely be taken as an example of what ought to be done in every State in the Union. The entire letter is appropriated to the presentation of a single measure of sanitary medicine, to wit, the "declaration," or the "giving notice" of the presence, and of the suspicion of the existence, of a contagious disease. This is well done. The existence of a disease of that nature, once known by the first case discovered, and the measures taken to dispose of it, are, after all, the essential means for the prevention of the invasion and spread of one of these scourges.

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VETERINARY COLLEGES OF ENGLAND.—In one of our late issues, speaking of an attempt which was about to be made by the French veterinarians to obtain the enactment of a law regulating the profession in that country, we called the attention of our readers to the clause which we thought might be of interest to recent graduates in search of a post-graduate's education and of a diploma from one of the French schools.

We have since obtained information from England, which we conceive may be yet more important to the graduates referred to from this country. The Catalogue of the new Veterinary College in Edinburgh states that "a student holding a Foreign or Colonial Veterinary Diploma shall be exempt from attendance on the Course of Lectures for the first two years, and from the Examinations at the end of those years, respectively."

According to this provision, attendance during only one session will be required from a graduate holding an American degree. Of course, the past history of "diploma mills," and the career of McClure, will be remembered by Principal Williams, and there is every reason to believe that the character of the diploma will be carefully investigated to insure the authenticity and genuineness of the parchments. Dr. Mitchell, who graduated second in the class of 1884-'85, and secured the prize offered by the American Veterinary College, is now in Scotland, and has matriculated at the new Veterinary College in Edinburg. We believe he is the first American graduate who has been allowed to take advantage of the privileges referred to.

NEW YORK STATE VETERINARY SOCIETY.—We publish the report of the last meeting of the New York State Veterinary Society, held on the second Tuesday of October.

Amongst the important proceedings on that occasion was an alteration of the by-laws, by which the meetings, which since the foundation of the society in 1874, had been *regularly held monthly*, are to be hereafter held only *quarterly*.

The reasons for this action were not strongly presented, and no opposition was offered when the question came to a vote. What has decided this alteration of the by-laws is not worthy of inquiry. The question is settled, and whether this means death or

new life and vigor to the society is a point which will soon be decided. But whatever may be the result of this measure to the New York State Veterinary Society, its original constituent members will leave to her name a good record in the law which was passed last year regulating the practice of veterinary medicine in the State, thus striking the death blow to veterinary quackery in the State of New York.

CANINE MASTOIDITIS.—Our readers will find in our present number the first of a long article on this common disease of dogs. It is a very valuable addition to the pathology of canine diseases, and one which has, so far as English literature is concerned, been but inadequately, and certainly very imperfectly, treated. A careful perusal of the article of Dr. Stockwell will prove very interesting and instructive.

JOURNAL OF COMPARATIVE MEDICINE.—We regret that the late arrival of this excellent paper does not allow us to give it the proper notice it deserves. Great changes have taken place in the editorial management; and while Dr. Conklin of N. Y. remains as one of the editors, the name of Dr. Billings, who has done so much for the journal, is now dropped from the staff. We find it replaced by that of the Dean of the Veterinary Department of the University of Pennsylvania, Dr. R. S. Huidekoper, M.D., with the prospective assistance of correspondents from every veterinary school of America, and some from Europe. The past of the *Journal* gives large promise of its future.

DR. GADSDEN'S APPOINTMENT.—The Union Stock Yards have asked that an expert veterinarian be stationed at the yards, and the telegraph announces that Dr. Gadsden, of Philadelphia, has been designated by the Governor for this service. Well, Dr. Gadsden is certainly a good veterinarian, but Sam Allerton, Nels Morris, or the editor of the Chicago *Journal* know so much more than anybody else about cattle diseases that the Stock Yards people should have asked to have one of these detailed.—*Breeders Gazette.*

ORIGINAL ARTICLES.

CANINE INFLAMMATORY MASTOID DISEASE I

By G. ARCHIE STOCKWELL, M.D., F.Z.S.

Strange to say, in spite of the important fact that the canine stands high in the scale as an intellectual and sensual being; that his physiological and nervous functions are marvelously akin to those of man; that he is subject to like influences and causes in marked degree, even to the development of pure psychoses of reflex origin; comparatively few efforts have been made to exhibit the close relationship that exists, particularly in the development of morbid phenomena. Indeed, the prevalent impression appears to be that the dog is a "*natural animal*,"—whatever that may be intended to convey,—and therefore without special tendency to, or aptitude for, acquiring disease; a premise that is untrue of *any* creature, though domestication, or other change in modes of life, undoubtedly inculcate each their special train of evils.

Aside from *rabies*, there is, I believe, no disease of the canine nosology so completely at the mercy of ignorant speculation as the so-called "*canker*," a term that has no specific meaning more than "*spreading ulcer*," and generally accepted as a synonym for progressive malignant tissue degeneration. I am aware of no work devoted to comparative or special medicine that offers any pathological explanation of the malady, neither can I discover that any special attempt has been made to elucidate the problem. Indeed, the term appears merely as a make-shift to cover deficiencies of knowledge and education, for it is, I find, applied indiscriminately to a majority of the diseases of the canine auditory apparatus, external or internal, especially if accompanied by suppuration. This lack of knowledge may be attributed to two causes chiefly. 1. The superficial attention paid to diseases of the dog as compared with other domestic creatures deemed of more pecuniary and economic importance. 2. The imperfect character sustained by general and special medicine alike, neither of which can be deemed in any sense an

exact science! Again, comparative medicine suffers from the ignorance of the masses; in spite of our boasted civilization, any individual, no matter how illiterate or brainless, is held competent to administer to the ills of animality, (and even humanity), and there appears to be implanted within every member of the human race an inherent desire to dabble with "*physic*," exhibited in inverse ratio to the degree of intelligence.

The canine ear differs less from the human than might at first be imagined from comparison of external characteristics of both crania, consequently, under the supposition the latter may be more conveniently at hand, I select it for illustration. For all practical purposes, it is only necessary to remember that the mastoid process in the dog is situate higher up than in man when viewed in the same plane, a difficulty that may be overcome by lifting the posterior portion of the human *os temporis* to an angle of 25 degrees. With this understanding that the human crania is selected merely for illustration, and that the relations expressed are purely canine, and referring to the larger animals, let us select the left temporal bone for convenience and definiteness.

Starting with the external opening of the ear we first observe an annular leaf of osseous material, developed in varying degrees in different subjects and species, curved underneath, and cemented anteriorly to the *squamous* portion, and posteriorly to the *petrous* portion of the *os temporis*. Following the direction of the *meatus auditorius externus*, at its further extremity is encountered the drum or *membrana tympani*, which preserves the same general character and relations in all higher vertebrates save in the one factor of size. With a tendency downward and inward, and an inclination forward of about forty-five degrees, it presents the appearance of a firm, somewhat elastic, semi-transparent membrane, blocking the way to the *tympanum* or middle ear. Beyond is found an apartment of extreme shallowness (the middle ear) more lofty by one-half than the *meatus*, some three lines in depth, and eight and a-half in anteroposterior measurement. Midway between the floor and ceiling in the anterior wall, we find the opening leading downward and inward to the posterior pharynx—the *eustachian way*. Near the centre of the farther wall, opposite the drum, is the *promotory*,

well defined by the lower turn of the *cochlea*, and above the *fenestra ovalis*, where terminates the polished system of minute levers and sound-transmitters, the *ossicles* (*malleus*, *incurs*, *stapes*, and *os orbiculare*), that form a chain across the cavity connecting the *membrana tympani* with the *vestibule*. Passing through the *fenestra ovalis* to the internal ear, the opening of the *cochlea* and the *spiral way* appear, and beyond, at the back, the *semicircular canals*. Returning and examining the posterior wall of the *tympanum*, an opening is revealed leading backward and upward to the chamber over the external meatus, the *antrum mastoideum*, and beyond, backward and outward (more *downward* in man) the series of *pneumatic cells* or *mastoid spaces*, oftentimes many in number, perhaps but few, varying even in individuals of the same species. In most young creatures, especially the new born human, the antrum mastoid alone is found, the inner table of the bone being in an incomplete state of development, and the sense of hearing problematical, if not absolutely in abeyance.

Turning now to the central aspect of the *os temporis*, observe upon the inner wall of the mastoid the groove curving round upon the posterior portion of the petrous bone, that receives the *lateral sinus*. If an old skull is at hand, eroded from long burial, evidences of decay will most probably appear in the vicinity of this canal, which demonstrate how extremely frail is the osseous partition separating the *antrum mastoideum* from the middle lobe of the cerebrum, in spite of a polish that inculcates a deceiving appearance of hardness and solidity. In the undeveloped crania of young animals this partition is most superficial, not infrequently entirely wanting, which accounts for discharges from the ears occurring coincidently with convalescence from maladies having no definite connection with the auditory apparatus, as scarletina in children. Note also, in the groove of the lateral sinus a foramen, which transmits the *mastoid emissary vein* from without through the external surface of the mastoid, transversing the pneumatic spaces on its way to form a junction with the sinus! Again, I would call attention momentarily to the scalp surface of the mastoid, and to the thin delicate structure of the outer table of the bone directly over the cells or spaces!

The foregoing is fairly descriptive of the seat of mastoid diseases, or "canker;" but before proceeding further it may be well to consider a few brief correlative facts:

Diseases of the auditory apparatus are commonly summed up specifically and technically under the heads *otitis* and *otalgia*. The latter demands but passing notice since its proper province is to define simple neuralgic conditions only; it is a frequent concomitant of *otitis*, and symptomnal rather than specific. *Otitis*, however, is made to embrace many and varied forms of inflammation of diverse origins and localities, and may be more definitely divided into *otitis externa*, *o. media*, *o. interna*, and *o. cellulosa*, the latter constituting mastoid diseases.

A primary *otitis* or inflammation of the mucous membrane lining the auditory apparatus, if confined merely to the locality in which it originates, is usually self-limited, and hence is often described as an *otalgia*, or in the venacular "ear-ache;" but if also accompanied by suppuration and discharge through the *meatus auditorius externus*, the term *otorrhæa* obtains.

A visible *otorrhæa* may or may not be a concomitant of mastoid disease; this must in a measure be determined by the character and relation of the discharge. If foul, sanguous, and of an ancient cheese-like odor, it may, however, safely be taken for granted. The impossibility of recognizing a possible *simple otitis cellulosa* precludes specific mention thereof, since it must arise and disappear coincidently with *otitis media*, or *o. media et interna*. The products of any and all forms of *otitis* may, and frequently do, find outlet only through the eustachian way and post pharyngeal space, leading to the supposition of some catarrhal form of influenza, as distemper; or *vice versa*, a catarrhal form of inflammation may extend to the ear securing an *otitis*: in so-called epizootics and distempers the ear usually suffers in greater or less degree, since there is marked sympathy among all mucous membranes, as observed in ophthalmias of strumous origin, or during dentition, &c. An *otorrhæa* of simple catharrhal origin is usually self limited, like the *otitis* from which it is developed, and this is more especially the case among canines than in man, being often of so trifling moment as to wholly escape attention. *Otorrhæa* also results from

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impactions of foreign bodies, or hardened secretions, in the auditory canal or upon the drum membrane, provoking suppuration and violent otic inflammation; it is nature's remedy to remove the evil, and if unsuccessful is prone to result in mastoid disease. Panaceas, lotions, caustics, and nostrums innumerable administered for simple otic inflammations and *otorrhæa*, without knowledge of cause, are responsible for more injuries in canines than the laity will ever know, since the well trained animal obeys instinctively, and by eye oftener than through aural perception. A dog of ordinary intelligence that will not, during a moment of quiet, question some unusual concealed sound, as the ticking of a watch or vibration of a tuning fork, at a distance of four or five feet if held in the same line and plane with the ear, is most probably deficient in hearing. It is generally believed that all Pomeranian dogs are deaf. This is not true, save during puppyhood; as a race they are extremely slow in development of pneumatic cells, which not infrequently delay their appearance until the seventh, eighth, or ninth month.

As already intimated, any form of otic inflammation, if unrelieved, either through natural or artificial causes, must invariably proceed to mastoid disease. Primary inflammation of the mastoid antrum and pneumatic cells, save as the result of direct injury, is unknown. The lining of the mastoid cavities is but a proliferation of the mucous membrane of the middle ear, hence the sympathy that must exist during inflammation of that cavity.

Mastoid disease manifests itself in three ways: 1. As periostitis of the outer surface of the bone. 2. Congestion and inflammation of the mucous lining of antrum and cells, commonly both. 3. Caries and necrosis involving the middle and internal ear, followed, perhaps, by *meningitis*, *cerebral abscess*, *thrombosis* of lateral sinus, and *pyæmia*.

The first may arise from acute inflammation of the middle ear and consecutive inflammation of the external auditory canal. The second and third are the result of direct extension of an *otitis media* to the antrum and spaces of the mastoid. Inflammation in any case may arise at any time during life and the continuance of purulent accumulations within the middle ear, and may appear

suddenly and without warning within a few hours, or days, or only after a lapse of weeks, months, or years! There is no definite period of incubation or invasion, and no phase of life exempt; though, for obvious reasons, young creatures are more disposed thereto as a sequel to many maladies, especially from distempers.

Commonly the history of a case is most indefinite. Could the desired information be obtained, it would probably be something as follows: Restlessness, followed by shaking of the head, indicative of *tinnitus aurum*, sudden manifestations of deafness, partial or complete, succeeded by a brief period of excruciating pain. Unfortunately, these stages are commonly past ere scientific aid is invoked, and shaking of the head, upon which so much stress is often laid, does not again appear save as pus irritates the inner portion of the external auditory canal, producing a tickling sensation. Even a febrile condition may be difficult to establish, except by visiting the creature at unusual hours, the pulse and thermometer alike failing to register any marked disturbance of circulation or temperature. If aural difficulty be surmised, the speculum and mirror will establish the fact; the great difficulty in employing either being to get the animal in position favorable to light.

Mastoid pain when present is commonly so severe and peculiar in character as to be pathognomonic; once recognized it will never be misunderstood on a second occasion, and it frequently results in mania, or delirium, when the poor creature, by reason of lolling tongue, rigid lower jaw, injected eye, and dripping saliva, is commonly pronounced *mad*. The suffering alone is amply sufficient to secure injections of conjunctiva and cornea, and the pain experienced in moving the jaw, or on attempting to swallow, sufficiently accounts for other so-called rabic peculiarities; moreover, the wandering mania which is held symptommal of rabies, is every way peculiar to the excruciating suffering and delirium induced by *otitis cellulosa*! The pain radiates to the frontal, temporal, and occipital regions of the affected side, and its seat is with difficulty determined even in the human animal. The poor dog, if quiet for an instant, rests his head upon his paws while lying, with the diseased ear inclining toward the ground; if standing,

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it is still inclined, and a little care will probably reveal stiffness and rigidity of the lateral muscles of the neck, more particularly of the *sterno cleido mastoid*, which if found in connection with enlarged maxillary and sub-lingual gland, or hypertrophied lymphatics, is extremely suggestive as evidence. More especially may the disease be pronounced mastoid if tumefaction and swelling, markedly sensitive to the touch, is revealed at the posterior and upper border of the ear.

If not interfered with, the malady progresses rapidly; symptoms of general debility and marked anorexia supervene, followed by rapid emaciation, the result of derangement and perversion of the digestive and nutritive functions, the nervous and circulatory symptoms suffering accordingly. The face exhibits those unmistakable and peculiar evidences in the canine of excessive suffering, enfeebled vitality and weakened heart function, including the thin indrawn, uplifted lips; the animal is peevish, cross, melancholy, and prone to snap at everything offered, even his master's hand, though on second thought he will probably think better of it, and exhibit his affectionate nature; deprived of all rest and sleep, he may become dangerous, even vicious in his suffering and the dementia induced; salivation, the result of disinclination to swallow, may be profuse, perhaps accompanied by rigors; and life is indeed to him a veritable burden. Sooner or later, if relief be not afforded, caries and necrosis follow with their foul blackened discharge, succeeded by *meningitis, thrombus, pyæmia*, and finally death, which frequently results unexpectedly.

All the foregoing are important symptoms, yet so capricious is the disease, one or all may be conspicuous only by their absence. Often they are most vague and undefined in character, requiring nice perception and discrimination to determine, though a little patience and manipulation will usually discover some clew that will lead to others.

That such a malady demands most careful attention, not only in all the details of diagnosis, but also of treatment, is obvious, and that it cannot be safely meddled with by those ignorant of its pathology is also patent for the following reasons:—First, because of its exceeding gravity, by reason of locality and re-

lation to cerebral nerves and vessels, and the fatal trains of results that are so frequently the sequel:—Second, under the most favorable circumstances, unaccompanied by precise expert treatment, a deaf and diseased ear must remain, offering abundant opportunity, perhaps, for a second onslaught of the same malady. Unfortunately the disease receives next to no attention at the hands of teachers of either veterinary or human medicine.*

(*To be continued.*)

CASTRATION OF CRYPTORCHIDS.

By M. JACOULET.

(Continued from page 311.)

2ND ABDOMINAL CRYPTORCHIDY.

The second part of the castration is here divided into four steps. Those consist of: (A) Perforation of the inguinal interscopic. (B) Searching and prehension of the testicle. (C) Ablation of the organ. (D) Supplementary dressing.

A.—Perforation of the interstice.—As Mr. Degive says, this is undoubtedly the most important, as it is the most delicate of the steps of the operation. Upon its proper execution the success of the operation almost wholly depends. Its skillful performance requires that the operator should bear well in mind the anatomical disposition of the parts, and its satisfactory completion depends mainly upon his coolness and well guarded confidence in himself and his qualifications.

The operator should place himself towards the back of the patient, as in the two preceding steps of the operation, and may

*Recently I was consulted by a lady who sought relief for an aural discharge of long standing, and who, as she informed me, had been advised by the family medical attendant to "let it alone" since it would be "a waste of time and money" to attempt alleviation. This was the utterance of a gentleman standing deservedly high in the medical profession, and echoes a widely prevalent idea. It is a leaf from a huge book of errors for which irresponsible and defective teaching is alone at fault. The impression is generally conveyed that to interfere with a chronic discharge from the ear is to induce more serious results, and had its origin doubtless, in observation that the sudden cessation of an *otorrhea* of long standing is frequently followed by grave cerebral disturbance, forgetting the latter is due to damming of purulent secretion in the mastoid spaces, and not to appropriate measures looking to removal thereof.

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use either hand at his discretion. The hand and arm being well oiled, the former is formed into a cone by bringing the fingers together, and is carried towards the external ring, the internal or prepubic commissure and posterior edge of which are distinctly felt. It should be introduced into this ring by a slight pressure, and a rotary motion. Then turning it outwards, upwards and slightly backwards, it is pushed carefully, methodically and with all the tact at his command, into the inguinal interstice, by a semi or quarter rotation from left to right and again from right to left, close outwards to the external angle of the interstice.

In this way, the hand slowly penetrates, and as it were, slides onward, as it makes its way through a single separation of the two organs (the small oblique muscle and the crural arch) which in resting against each other form the inguinal tract, and by the laceration of the cellular tissue which fills it up.

To avoid lacerating the small oblique muscle of the abdomen with the ends of the fingers, the operator must, during all the steps of the introduction of the hand, keep it well applied upon the crural aponeurosis, and upon the internal commissure, the dorsal face being turned forwards against the fleshy fibres of the muscles, and the fingers being slightly flexed backwards.

Deliberation in the work is indispensable. The surgeon should move slowly, and pause in his work if in any doubt as to the parts which are touched; and he should stop at the slightest doubtful sensation, to proceed again only when certain that everything is right.

Thus guided, the hand reaches the bottom of the interstice, and the pulp of the fingers will then readily distinguish the peritoneum, and through this, the intestinal circumvolutions. It remains only to perforate this, which is done by pushing two or three fingers through, and opening them, thus penetrating the abdominal cavity as the peritoneum is torn. The testicle or the epididymis is usually felt at once, and they are then brought outwards; but cases sometimes occur in which it becomes necessary to enlarge the opening in order to introduce the entire hand into the abdominal cavity.

This peritoneal laceration, through which access is had to the

abdominal cavity is, as we have already said, made some 12 or 15 centimetres outward of the linea alba, and near the sub-lumbar region. This renders the occurrence of hernia difficult on account of the elevated situation of the opening, as well as by the closing of the tract, which takes place as soon as the hand is removed, in consequence of the exact co-operation of the small oblique muscle, pushed backwards against the crural arch by the intestinal mass.

We do not hesitate to repeat that, if great caution has not been observed, as soon as the external inguinal ring is passed through, to turn the hand outwards in the interstice in order to avoid the perforation of the small oblique, by the position given to it, and the careful movement, the peritoneal opening would be made at a point too low, and too close to the median line, while, moreover, the laceration of the muscle could not be closed up with precision at the moment of the withdrawal of the hand, evagination would be the unavoidable consequence of the false manipulation.

In the perforation of the inguinal interstice the operator may meet two principal difficulties :

"1st.—The natural resistance of the external inguinal ring, and

"2d.—The pressure resulting from the occasional very violent contraction of the muscles of the abdomen and posterior leg."

Mr. Degive gives clear instructions for overcoming these difficulties. He says: "Very fortunately these obstacles are not insurmountable. The operator can always overcome them by proceeding slowly, quietly and watchfully.

"It is not a rare thing in these circumstances for the arm and hand to become quite exhausted and even paralyzed both by the efforts made and the continued compression experienced. In these circumstances the operator may easily lose confidence and the presence of mind so essential in the operation to insure a successful conclusion.

"It may even happen that he shall relinquish the undertaking just at the point of time when a little intermission for rest at the

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proper moment would have enabled him to finish it with ease and assurance. We must acknowledge that we have not always followed this suggestion, and must plead guilty of once failing in the operation because of our proceeding too hurriedly and with an unsteady hand. It was our third operation; we had not completely exposed the inguinal ring; the hand had become fatigued by pushing against the resisting tissues, and was powerless when it reached the inguinal interstice. At this point our strength and facility of action failed, and the small oblique was run through. An extensive eventration was the result, followed by the death of the patient. This case furnished a good lesson and we consider it worth recording. Since then we have often noticed this weakness of the hand, especially after its introduction into the abdomen. Whenever this has taken place we have immediately suspended the operation, and have taken a moment for rest; we have even at times withdrawn the hand, either from the inguinal space or the abdominal cavity, and we have always had reason to be satisfied with our course.

"To be cool, wisely slow and always watchful of the strength of the hand with which we operate, such are the essential conditions of success in the perforation of the inguinal interstice."

Like Degive we have failed twice in this step of the operation, with eventration as the consequence of the failure. We have since always succeeded in avoiding this accident by following the cautionary recommendations before given.

B.—*Searching for and prehension of the testicle.*—The inguinal interstice being opened, great care must be taken to avoid plunging the hand suddenly into the abdominal cavity. On the contrary, it is better to delay a little and allow the hand to resume its entire tactical force and facility before proceeding. Ordinarily the two or three fingers which have torn the peritoneum will find immediately about the opening and without penetrating deeper, either the testicle, or more commonly a portion of the epididymis, which, as we have said, is very large and pendent. When neither of these conditions occur the whole hand is to be pushed into the abdomen by slow degrees, advancing only as the fingers recognize by their sensitiveness the nature of the organs they are touching.

If the hand has been pushed too suddenly through the mass of the intestinal circumvolutions the connection of the parts might be much disturbed, and the search for the testicle rendered more difficult.

If, after all, the hand becomes fatigued and its sensitiveness impaired by the contraction of the abdominal muscles and of the posterior leg and it becomes necessary to withdraw it, let it have sufficient rest, carefully avoiding meanwhile the possible escape of the intestines.

Once in the abdomen, the hand must, as much as possible, be kept with its dorsal face turned towards the intestines, and without changing its position, the exploration continued with the pulp of the fingers. It is on the boundary of the pelvis, with the abdominal cavity proper on a level with the anterior border of the pubis which guides it, on one side of the median line, towards the internal face of the flank, more or less high in the cavity, that exploration must be made. Either the testicle itself, or only the epididymis or simply the suspensory ligament, will then be detected.

It is not a rare circumstance for the hand when it has penetrated the abdominal cavity, to feel the epididymis, quite *loose* and *hanging down*, touching at once the ends of the fingers. It is a cord, dilated at both ends, very soft, smooth and slippery to the feeling. It is easily recognized by these characters, and as soon as it is taken hold of, the testicle, drawn with it, is readily felt by the hand.

This organ also is easily recognized. It is an ovoid mass, slightly flattened, about the size of a hen's egg, sometimes somewhat larger, but oftener smaller, flabby yet elastic, and giving a peculiar sensation of roughness, due to the sinuosities of the blood vessels running on its surface. If, instead of it, one should take hold of a ball of manure, through the intestines, the error will easily appear from the fact that the ball of manure is not ovoid, but an irregular form; soft, but not elastic; with a perfectly smooth surface, and without annex or support; and moreover the continuity of the canal in which it is contained would serve as an important differential character.

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Again the hand may come in contact with the suspensory band, instead of the testicle. It must then be remembered that this is a flattened cord, dropping from the sub-lumbar region, where it is fixed, and supporting the testicle at its other extremity. The deferens canal at its posterior border offers sinuosities by which it can be readily recognized. In any case, as soon as the testicle or the epididymis has been secured, it is to be slowly drawn outwards, and in this way is easily brought to the point designed.

When the introduction through the peritoneum of two or three fingers only has been sufficient to find the organ, it is brought into the inguinal tract by slowly drawing out the hand. But when it has been entirely introduced into the abdomen, the testicle must be brought to the peritoneal opening without removing the hand, by simply flexing the fingers from forward backward. It is then pushed into the inguinal interstice, while with the dorsal face of the hand the intestinal mass is kept back and evagination prevented. When the organ has passed beyond the peritoneal laceration, the hand, forming a cone as when it entered the interstice, is very carefully and slowly withdrawn, in such a manner that the opening gradually retracts as a consequence of the pushing of the viscera against the fleshy portion of the small oblique muscle, and so becomes entirely closed when the fingers leave its edges. At the same time, the testicle has been drawn to the external inguinal ring, or near to it, but always sufficiently to have the cord as short as it may consist with security, by means of any of the constrictor apparatus in use.—

(*To be continued.*)

M. PASTEUR'S PREVENTIVE TREATMENT OF HYDROPHOBIA.

By W. PENDRY, D.V.S.

That many cases treated by M. Pasteur for hydrophobia would not, if allowed to run their course, develop any symptoms of rabies, is generally admitted to be a fact beyond dispute; but that the percentage is acknowledged by eminent men of both the medical and veterinary profession to be so small, will occasion some surprise. I have always held that hydrophobia is a much

more rare disease than it is even now, at this late date, supposed to be ; and having given the subject considerable thought, and being anxious to gather some facts for myself, apart from that of seeing the *modus operandi* of inoculation for hydrophobia, I visited Paris a few weeks ago, but to give an account of what I saw in that respect would only be repeating what has now become "an old story," except that I may say that I saw some sixty-eight patients inoculated, and a more impressive scene I never expect to witness in my life. Old men and women, children of both sexes, of all nationalities, in fact, high and low, rich and poor, were there assembled together, all bent eagerly upon the same errand and to receive the same treatment, and as each one came forward to receive—what? the germs of rabies into their system; what else can we call it?—his or her face was a study; in short, it was a scene I shall never forget, and I expressed a wish at the time that I was an artist with the ability of putting the same upon canvas, and if it had been executed by the same who painted "The Roll Call," it would have proved as everlastingly interesting.

During the pleasant time I spent with Dr. Fleming, the subject of hydrophobia was entered into, and he informed me that the local government board of London had appointed a committee to inquire into M. Pasteur's preventive treatment, and such committee consisted of Sir James Paget, Bart., F.R.S., chairman; Dr. Lander Brunton, F.R.S.; Dr. George Fleming, F.R.C.V.S.; Sir Joseph Lister, Bart., F.R.S.; Dr. Quain, F.R.S.; Sir Henry Roscoe, M.P., F.R.S.; Professor Burdon Sanderson, F.R.S., and Professor Victor Horsley, F.R.S.

This committee had thoroughly investigated the subject, and had prepared their report, but which had not been published, as the committee could not agree on some points, but among the conclusions arrived at was, that *five per cent.* could be safely taken to represent the average number of cases of hydrophobia following bites of rabid dogs, when all classes of cases were included. I have expressed an opinion that not more than ten per cent. of cases reported as hydrophobia would really have developed rabies, and have been laughed at, and here we have a com-

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mittee of the highest order, who, after careful personal investigation, put it down at half that percentage. The report further says: "From this it would follow that since of the total number of ninety patients sixty-three were bitten by dogs known to be rabid, and the remainder by dogs whose rabidity was in some instances probable, and, in any case, as well investigated as in those instances on which the gross statistics at present available are founded, at least three patients should have died of hydrophobia had they not been subjected to M. Pasteur's treatment." Yet while placing this low estimate upon the cases treated, they acknowledge the one all-important fact, "that the material he employs for inoculation is actually the virus of rabies," besides coming to the conclusion that the interval between the bite and the first inoculation should not exceed fourteen days.

I am indebted to Dr. Fleming for a copy of the following cases, which were taken from M. Pasteur's note-book. I consider them of far more value than comments, and so forward them, in the hope that they will be laid before the profession of this country. They are dry facts, but they, in my opinion, speak volumes :

(*To be continued.*)

REPORTS OF CASES.

ACTINOMYKOCIS BOVIS.

By Dr. WM. HERBERT LOWE, State Veterinary Inspector, Paterson, New Jersey.

I was called, February 18th, 1885, to see a very interesting case. A cow owned by R. G. Ryerson, of Mountain View, N. J. was prostrate and in a very emaciated condition. I think I never saw a cow living have so deathly an appearance. There was a very great enlargement of the inferior maxillary region. In looking earnestly at the condition, while hearing the history of the case, I was forcibly impressed with the idea that I had a veritable case of actinomycosis, described by Fleming as "a new infection disease of animals and mankind." The owner agreed with me that the cow had better be destroyed. I held a post-mortem at once and sent the inferior and superior maxillary regions,

tongue, heart, liver, kidneys, etc., to the New York Post-Graduate Medical College. In my last report to the New Jersey State Board of Health, I gave a brief account of the disease, which was published in the Agricultural Report.

A carefully prepared paper on actinomycosis in men and animals by Prof. Thomas E. Satterthwaite appeared in a recent number of the *Quarterly Bulletin* of the Clinical Society of the New York Post-Graduate Medical School and Hospital. The article has special reference to the case in question and is as follows:—

"Last winter I received a specimen of *actinomycosis bovis*, from Dr. Lowe, Veterinarian and State Inspector in Paterson, New Jersey. In this case the disease had attacked the upper jaw of a cow and the bones of the face were all more or less involved, the nasal roof being pressed outwards and the vault of the mouth forced down by the new formation, which had finally perforated the skin at the middle of the nose. In the puriform material that exuded I detected the characteristic yellowish white or lemon yellow granules that have been described in connection with this disease. It is generally known that Bollinger, in 1877, first called attention to the parasitic nature of the affection. Previously it had been known, in Germany at least, by the name of "hautzott," osteosarcoma, etc., but its real nature has not been appreciated.

In attacking the jaws of cattle it usually arises from the alveolar ridges, or from the cancellus tissue, and in the latter case it may easily be mistaken for a central osteosarcoma. On section the growth was permeated by bony trabeculae, in whose interstices or ramifying passages, as they may be called, was a greenish yellow deposit, which proved on microscopic examination to be a low form of embryonic connective tissue, in which were embedded the actinomycotic bodies. These varied in size from a barleycorn upwards, were capsulated, yellow, and had a fatty feel.

Similar deposits have been found by some observers in the pharynx, larynx, gastric and mucous membrane and contiguous lymphatic glands of cattle. Sometimes there were fluctuating tumors near the angle of jaw, but apparently unconnected with it. Occasionally these deposits simulated in gross appearance, tuber-

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cles of the lung. They were often acinose or mulberry-shaped, and when teased apart found to consist of fungoid filaments closely intertwined, with expanded or knobbed extremities. Microscopic examination showed that the filaments represented the hyphens and conidia of a vegetable organization, closely allied to, if not a member of, the mould fungi, but a species that had never been known independently of this disease. The conidia or spores radiate from the stem of the hyphens, something like the petals of the common daisy, and hence the name *actinomyces* (*actinos*, a ray, and *mukes*, a fungus). These appear to be two varieties of the fungus, or two forms under which it is found.

In 1878 James Israel published the histories of two human patients, who died with pyæmic phenomena, but where these fungi were found in the diseased tissues; it was not then known that the human family was attacked. In fact, though Israel detected the parasitism and described them, he did not appear to realize their true relation to the disease, nor did Langenbeck, who, in 1845, was probably the first to have observed them in either man or animals.

Ponfick, however, deserves the credit of being the first who recognized the causal relation they have to a variety of peculiar affections. At an autopsy in the Pathological Institute of Breslau, he found these fungi in the case of a man forty-five years of age, who had been suffering from a chronic pulmonary complaint, where an abscess had developed upon the right pleura. In the same year he saw and studied four additional cases.

In 1881 Partsch published two more and Rosenbach, of Goettingen, gave the clinical histories of others. Altogether, Ponfick had collected sixteen cases in his monograph published in 1882. He had then studied it in over fifty animals, chiefly horned cattle. He found that with them it usually attacked the jaw, near its angle. Here a protuberant mass pushed its way through the skin; hogs were attacked in a similar way, but more commonly it took the form with them of a suppurative mastitis. In cattle a spontaneous cure may take place. Experiments thus far appear to indicate that it is not engendered by feeding; but after inoculation, or injection into the vessels, the characteristic phe-

nomena will develop in about a month; in three or four months there will be marked symptoms.

In the human disease there are some clinical points of special interest. If it attack the face, the result is usually favorable. In such cases it appears as a soft fluctuating abscess, with an infiltration of the adjacent soft parts at the angle of the jaw; in about one-half of such cases the disease extends as far as the sternomastoid muscle; sometimes it gravitates down to clavicle; it has the appearance of a cold abscess and is not associated with constitutional phenomena. After discharge has begun a fungous mass protrudes through the orifice, but eventually a sinus is left, usually communicating with several ramifying passages. In fatal cases the disease continues from seven to twenty months. In some of them metastases occur, and several parts, such as the pleura, pericardium and abdominal cavity were involved.

So far as we know, any part of the body may be attacked, but from the fact that it usually selects the jaws and that its attacks are contemporaneous with an ulcerated surface, while, on the other hand, these fungi are not uncommonly found about the teeth, it is conjectured that the parasite enters with the food, but only takes root upon an exposed surface. Since Ponfick's report, twelve additional cases have been published, chiefly by Italian and German writers. The parts attacked have been the lungs, (2), the intestines (3), the ovarian tubes (2), the jaw (4), the abdomen (1), two having been contributed by Dr. J. B. Murphy, of Chicago."

The following references are given to facilitate the study of this interesting subject:

- (1). Bollinger.—Ueber eine neue Pitzkrankheit beim Rinde. Centralbl., f. d. Med. Wiss. 1877, No. 27.
- (2). Pontfick.—Die Actinomycose des Menschew. Berlin, 1882.
- (3). Partsch.—Zwei Faile von Actinomyces. Breslau, Arztlich, Zeitschr., III. Jahr, S. 78, 1881.
- (4). Rosenbach.—Zur Kenntniss d. Strahlen Pitzkrankheit. Centralbl., d. Chir., 15, 1880.
- (5). Israeh.—Virchow, Archiv. LXXIV. S. 15.
- (6). Johne.—Bericht ueber d. Veterinier. Wesen in Koniglich Saehsen. 1879, S. 71.
- (7). Belfield.—"Swelled head" in cattle, Am. Pub. Health Ass. Rep., 1883, 1884, IX. III., 115.
- (8). Whitney.—A Case of Actinomycosis in a Heifer. Boston Med. and Sur. Jour., 1884, CX., 532.

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AUSTIN

POISONED BY CASTOR BEANS.

BY FLAVIUS J. SMITH, V.S.

On the night of September 25, 1886, I was called to treat two horses, the property of Mr. F. Upon my arrival I learned the affected animals had eaten some castor beans, that were left over from those planted last spring, on the morning of the 23d inst., and began to show signs of illness on the following morning. The symptoms were as follows, viz.: Complete loss of appetite, great thirst and nausea and gastro-intestinal irritation, frequently laying down in soft places and rolling from side to side. The pulse and respiration were increased in frequency and the temperature elevated. The animal most seriously affected purged freely and died soon after my arrival.

In the second case the bowels were constipated, and when relieved a large quantity of mucous came away with the contents. The amount of beans eaten by the sick animals could not be ascertained.

Treatment.—Antemetics, anti-spasmodic aperients and enemas; bromide of soda, used in small doses hypodermically, we consider one of the best equine antemetics in this and similar cases. The case was discharged on the third day, appetite fairly good and the bowels moving with their normal frequency.

Post-mortem examination made by artificial light. On exposing the bowels they appeared to be highly inflamed, and on laying them open from end to end it was found that the mucous membrane was destroyed almost their entire length. The spots of ecchymosis and extravasation and the inflammation gradually increased in severity from the stomach to about the centre of the floating colon, where there was a gangrenous spot about ten inches long. The contents consisted of fluids and solids, tinged with blood, undergoing fermentation, and a few oats.

No fragments of the beans were detected. The lungs and liver were congested, otherwise appeared to be healthy, as were the spleen and kidneys. The blood was black and coagulated, quick and freely in the cavities of the heart and large vessels.

AUSTIN, Tex., Oct. 6, 1886.

A QUEER TOOTH-PICK INTERFERING WITH MASTICATION.

By M. O'CONNELL, D.V.S.

Mr. W. S., of Greenby, Mass., called on me to visit his horse, which, according to his story, was losing flesh very rapidly. He is a young horse and had always been fat until about six weeks ago, when he began to get thin. Desirous to examine the condition of his mouth and of his teeth, I introduced my hand into that cavity and found a stick of hard appletree wood laying across the palate, wedged between the fourth molars, and which could not be removed without heavy force prying upon it. A very offensive odor came from the mouth, and a large ulcer was found on the palate at each one of the molars. I saw him a few days afterwards: these ulcers were found healing very fast, the bad smell of the mouth had almost entirely disappeared, the animal was eating well, and everything showed that in a short time he would regain his good and natty appearance.

CLIPPINGS FROM MEDICAL PAPERS.

THE PLAGUE, AND HOW TO ESCAPE FROM IT.

By J. W. GADSDEN, M.R.C.V.S.

The animal industries of the United States are in imminent peril from the ravages of an insidious, contagious and incurable disease in cattle, commonly called pleuro-pneumonia or lung plague. Many years ago it obtained lodgment on the Atlantic seaboard from imported cattle, and notwithstanding repeated warnings of the danger to be apprehended from its spread, based upon the experience of European countries that have suffered severely from it, our people blinding themselves to their peril, and by spasmodic and half-way measures simply averting the disease for a time in particular localities, have allowed it to spread until it has now obtained a firm foothold in the Western States, as well as in a number of the Eastern ones; and it is only a question of a very short time when it will find its way to the immense herds on the Western and Southwestern ranges,

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unless radical measures are at once adopted to exterminate it where it already exists, and prevent its communication to other parts of the country. This is a matter that affects not only the raisers and dealers in cattle, farmers, dairymen and butchers, but every man, woman and child in the country, for it strikes directly at the source of supply of animal food. Allow this disease to spread in the future as it has in the past, and the day is not far distant when the animals affected can be counted by the million, and not by the hundred as at present, and it is easy to perceive the effect this will have upon our markets and the scarcity of beef that must be the natural result.

For years back efforts have been made in some of the States to stamp out the disease, and some slight attempt has been made by Congress to give National direction to these efforts, but unfortunately it has been on the penny-wise and pound-foolish principle. Owners of cattle naturally object to having their animals killed without receiving full compensation for them, and the government, both State and National, has failed to make provision to pay for the animals that should be slaughtered to eradicate the contagion. As a consequence, temporizing measures have been adopted, animals apparently recovered have been permitted to live and mingle with healthy cattle. A partial quarantine has been established about infected herds that has been so loosely enforced as to be practically of no effect, and numerous experiments of inoculation have been tried. It has been very difficult to educate the people of this country to believe that pleuro-pneumonia was contagious, and harder still to convince them that it was incurable. Many animals that had been but slightly affected, apparently recovered, and to outward appearance to the unprofessional eye, were restored to their normal condition of health, and yet these very animals have been the means of spreading the disease all over the country, and while apparently healthy themselves, were centres of contagion that disseminated the seeds of the plague to hundreds of healthy animals.

While acting as an Inspector of the United States Government in 1881, in my report to the Commissioner of Agriculture I recommended as an ultimatum, without which the disease could

never be eradicated, "the killing of all chronic cases, no matter how *apparently* healthy they might be." I arrived at this conclusion from careful observation of the operations of the disease not only in this country but in England, where I had considerable experience in examining its development and spread. Since that time I have carefully watched the progress of the disease in this country, and have communicated with some of the most eminent scientists and experts in England and the United States, who fully agree that the greatest danger to be apprehended is from these chronic or apparently recovered cases. Prof. G. T. Brown, Royal Veterinary College, London, professional adviser to the British Government on contagious diseases of animals, in answer to an inquiry I addressed to him, says, under date of October 21st, 1884 :

"It is quite impossible to tell at what period recovered animals cease to be capable of communicating pleuro-pneumonia, but we have ample evidence to prove that they are the cause of numerous outbreaks of that disease in various parts of the country; in fact, you may take it to be a matter of absolute certainty that it is quite impossible to stamp out pleuro-pneumonia in any country where the so-called recovered animals are allowed to remain alive." In even stronger language, if possible, is this opinion reiterated with regard to chronic cases by Prof. Thomas Walley, Principal of the Royal Veterinary College of Edinburgh; Prof. William Williams, F.R.C.V.S., Principal of the new Veterinary College, Edinburgh; Prof. James McCall, Principal of the Glasgow Veterinary College; Dr. James F. Simpson, Vice-President R.C.V.S., England; Clement Stephenson, F.R.C.V.S., Chief Inspector for Northumberland, Eng.; Prof. D. McEachran, Chief Inspector of Stock for Canada, and Principal of the Montreal Veterinary College; Prof. Lautard, Principal of the American Veterinary College, New York; Prof. C. B. Michener, of the same college; Prof. Rush S. Huidekoper, Principal of the Veterinary Department of the University of Pennsylvania; Prof. W. L. Zuill, of the same institution; Dr. Robert Ward, State Veterinarian for Maryland; and Dr. Miller, United States Veterinary Inspector, Camden, New Jersey.

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In the face of this testimony, coming as it does from gentlemen who are eminent in their profession, and who have had exceptional facilities for observing and experimenting with the disease, and taken in connection with our own actual experience of the constant spread of the disease and its steady march westward, can we afford to longer close our eyes to the danger that threatens us, and allow all our cattle to be affected, before we awaken to the fact that action, prompt, heroic and effective, is needed at once to avert this dire calamity. See to it then that the laws already in existence are rigidly enforced and new ones enacted to meet the exigencies of the case. Have every animal killed that is or has been affected with the disease, or has had the slightest contact with diseased animals. The carcasses of healthy or apparently healthy animals killed by reason of contact can be sent to market after proper inspection to prove that they were not injuriously affected, while those that were infected should be buried or entirely destroyed.

In this way, and in no other, can the plague be checked and effectually stamped out. While the present outlay of money to accomplish this may be considerable, yet it will save millions of money in the future, protect the food supply of our country, and open the foreign markets which have been closed against us for seven years by reason of the existence of the disease in this country, and in the end as a matter of investment alone prove of incalculable benefit to the cattle interests of the country, and indirectly be of advantage to all consumers of animal food.—*Philadelphia Practical Farmer.*

SANITARY VETERINARY REGULATIONS IN MASSACHUSETTS.

STATE CATTLE COMMISSION,
SECRETARY'S OFFICE,
DEDHAM, MASS., Sept. 20, 1886. }

To Mayors and Aldermen of Cities and Selectmen of Towns:

GENTLEMEN:—That there may be a better observance of the laws relating to the suppression of contagious diseases among domestic animals in the State, the undersigned would respectfully

call your attention to the following extracts from the statutes of the Commonwealth :

Section 9, chapter 90 of the public statutes provides that whoever knows or has reason to suspect the existence of any contagious disease among the animals in his possession, or under his care, shall *forthwith* give notice thereof to the mayor and aldermen of the city or the selectmen of the town where such animals are kept, and for failure to do so shall be punished by fine not exceeding five hundred dollars, or by imprisonment not exceeding one year.

Section 1, chapter 148 of the laws of 1885 further provides that whoever has knowledge of the existence of a contagious disease among any species of domestic animals in this State, whether such knowledge is obtained by examination or otherwise, shall *forthwith* give notice thereof to the board of aldermen of the city or the selectmen of the town where such diseased animals are kept, and for failure to do so shall be punished by a fine not exceeding five hundred dollars, or by imprisonment in jail not exceeding one year.

Section 2 requires that the board of aldermen of a city or the selectmen of a town, having received notice of a contagious disease among domestic animals in their city or town, shall *forthwith inform the board of cattle commissioners* of the existence of such contagious disease.

Sec. 1, chap. 90 of the public statutes provides that when any contagious disease among animals exists in this Commonwealth, the mayor and aldermen of cities and the selectmen of towns shall cause the animals in their respective cities and towns which are infected, or which have been exposed to infection, to be secured in some suitable place or places within their cities or towns and kept isolated.

Section 13, chapter 90, provides that mayors and aldermen and selectmen shall carry out all orders and directions of the board of cattle commissioners to them directed.

Section 19, chapter 90, provides that any person who fails to comply with a regulation made or an order given by the commissioners shall be punished by fine not exceeding five hundred dollars, or by imprisonment not to exceed one year.

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The recent death of a citizen of this State from that loathsome and fatal disease, glanders, contracted from a diseased horse alleged to have been surreptitiously removed from isolation ; the too general negligence of horse-owners, veterinarians and others in giving notice of the suspected existence of contagious diseases, and the lax or indifferent action of municipal officers in taking possession or control of animals within their jurisdiction suspected of being infected with contagion, makes it imperative that we call the attention of all good citizens to the statutes provided for the suppressions of contagion among domestic animals, and that we issue and publish the following

*Regulations for the Guidance of the Mayors and Aldermen of
the Cities and the Selectmen of the Towns of the State.*

The commissioners therefore DO HEREBY ORDER the mayors and aldermen of cities and the selectmen of towns in this Commonwealth, when notified of the existence of any contagious disease among any domestic animals in their respective cities or towns, or of any animals suspected of being infected with such contagious or infected disease, to *isolate and securely hold* such animals till they are released by order of the commissioners.

Horses suspected of having the disease known as glanders or farey may only remain in the custody of their owners, and in the stalls or on the premises previously occupied by them, when, in the judgment of the mayor and aldermen or selectmen, such owners can be *relied on with full confidence*, and when such stalls or premises are deemed by the mayor and aldermen or selectmen suitable places for holding such diseased or suspected animals till taken in charge by the commissioners.

LEVI STOCKBRIDGE, Amherst,
A. W. CHEEVER, Dedham,
J. F. WINCHESTER, D.V.S., Lawrence,

Commissioners on Contagious Diseases Among Domestic Animals.

REVIEW.

HORSE BREEDING, by J. W. Sanders, Chicago.

The most careful of the observers who have watched and attentively noted the progress which veterinary science has within the past few years achieved in this country, will find that the results of their discoveries are still imperfect, if they have failed to include among the evidences in favor of this advancement, the numerous additions which have been made to the English language and literature in terms and phrases relating to veterinary science in all its branches and departments. For a long time and down to a very recent period England was looked upon as the home and source of our veterinary literature, and contributed through the writings of her Percivall, Blaine, Youatt, Morton, Spooner, Fleming, Gresswell and others, about all the instruction which found its way into our American libraries. It is true that a few additions to this common stock have been made by American authors, but truly also they are but "few and far between," although owing to the existing lack of energy which characterizes the veterinary writer of America, almost any new book of native origin relating to the science in any of its special branches would be nearly certain to secure a warm welcome from seekers after professional information in matters of veterinary interest where-soever it may be found, and more especially if the work should possess the value of the treatise now calling for notice at our hands, and like this should prove to be the work of an author thoroughly competent to handle the subject he has chosen.

"Horse Breeding" belongs to the class of books which every man ought to possess, and is as well calculated to be the companion of the veterinarian as that of the mere breeder; and while the omission of the fourth chapter would, in our opinion, improve the work, the fact that this is principally made up from sundry articles from the pen of Prof. Law will, in the opinion of many readers, tend largely to enhance the value of the work. The author tells us in his preface that his book should not be regarded as strictly a veterinary work. He may be correct in this, but still

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as zootechny in all its branches is properly a department of veterinary knowledge, horse breeding, it necessarily follows, must be included in any comprehensive consideration of veterinary science. Of the three chapters the first is appropriated to a concise elucidation of the general principles of breeding; the second acquaints us with the various breeds of horses now found in the United States, and the third treats of stallions, brood mares and foals. The entire book comprises about 250 pages of reading matter, of a highly instructive and interesting character.

CORRESPONDENCE.

IMPRESSIONS OF AN AMERICAN VETERINARIAN IN A TRIP TO EUROPE.

Editor American Veterinary Review:

DEAR SIR.—Many of my fellow practitioners seem anxious to learn through me the impression the English veterinarians have of their American brothers, as gathered by me during my recent visit there, and all the more so because I was returning to my native land after many years' absence in the role of an American veterinarian. It may be that they think I am like the average foreigner, who, on returning to his native heather, thinks there is nothing like "my own, my native land," and that they wish to test my zeal in that respect. But let this be as it may, I perhaps can give a true reflection of the opinions expressed of us during my visit there. I need hardly say that to those gentlemen of the veterinary profession whom I had the pleasure of meeting both in England and France, I introduced myself as an American veterinarian, and as such was received with open arms, and by many with that heartiness that made me feel doubly at home, and particularly by one whom we all hold in high esteem, Dr. George Fleming; a man whose very grasp of the hand gives you assurance of welcome and makes you feel that he speaks the sentiments of a large heart, when he informs you that "I am always glad to see our friends from across the Atlantic," and too was I received with the same kindness on my visit to the Pasteur Institute while in Paris, by Dr. Grancher and others.

It was during a stay in London that I made up my mind to pay a visit to the Royal Veterinary College, which is situated in College Street, Camden Town, and I cannot say that the first glimpse I got of that institution was favorably impressive, which perhaps was due to the naturally large ideas one gets of anything that appertains to royalty, and well might we say that a rose by another name is just as sweet.

The building is a low structure, and has much the appearance of the outer walls of an institute where people in this country get free board. It is quite large, covering about a block; having a gateway in the center on going through which you get your first favorable impression, as the large square inside is laid out in an oval grass plot, fenced in so as to give a good wide gravel drive all round, which is skirted by the hospital, lecture rooms, offices, &c., which are situated inside. I inquired of one of the few persons I saw there if any of the professors were to be seen, and was directed to the office of Prof. Ax, whom I found busily engaged in writing. I handed him my card, one portion of which he read twice, seeming hardly able to comprehend the letters "D.V.S." which followed my name, and here it was that I allowed him to take the first trick, by explaining to him how incomprehensible to the average American were the letters "M.R.C.V.S." which followed the names of their graduates, showing too that in hieroglyphics, they went us two better. He asked me if I wished to see the college, and on my answering in the affirmative, he secured me a guide in one of the students, asking me to return to his office, as he would like to have a talk with me. Our first visit was made to the hospital for horses, the whole of which is situated on the ground floor, passing from there to the dissecting room, where the smallness of the half dozen tables impressed me, and about which I expressed surprise, and which was not lessened when informed that they only dissected donkeys; here I felt like making a jocular allusion, but thinking perhaps it might hurt my friend's feelings I refrained from doing so. Our next turn was through several small lecture rooms, which seemed set apart for the lecture on some particular subject. There was a reading room for students with the different professional periodicals laying on a large table,

none of which, I was sorry to see, were American. The hospital for dogs was then visited, and which I found very complete, even to a strong cell for suspected hydrophobia cases, having double iron doors, at the side of which was a ring attached to a chain passing through the side and fastened to the collar of a poor little devil of a dog that had no more rabies than I had, an opinion I expressed at the time. The general lecture room was then seen, and which struck me as being quite small, and I wondered where they put the three hundred students they are said to have there at times. One part of the building that impressed me the most was that provided for cattle, sheep, &c., a point that I at once conceded was ahead of anything that I had seen here. The museum certainly did not well bear the dignity of its royal calling, but no doubt was due, as I remarked at the time, to a lack of space to properly display its contents.

I here ought to say that this is what is generally termed the Veterinary School, and that really the Royal College of Veterinary Surgeons is situated in Red Lion Square, a new building, having much the appearance of a large plain private residence, and it is here where the examinations are held. I called there, but found there was little to be seen—the Secretary's office, a library with a fair collection of veterinary works, a large board room, in which the most conspicuous thing was a life-size oil painting of Prof. George Fleming, which was about all I could find to see. I find I am diverting entirely from my subject, and I could continue to do so till I gave you an idea that I had a desire to monopolize the whole of the REVIEW by giving you my rough description of the Pasteur Institute in Paris, the Royal College of Surgeons, where through the kindness of Dr. Fleming I was allowed to spend considerable time seeing some of the most beautiful dissections it is possible to see, but I will let that go, and try to get down to the subject I wish to speak about. On my return to Prof. Ax's office I was asked, as an opening point for discussion, if I was not a graduate of Prof. Liautard's school. I said I was a graduate of the American Veterinary College, of which Prof. Liautard was simply one of the faculty. "But," he said, "it is like all such institutions in America, a private school."

I said it was not, it being regularly incorporated under the State laws, had a governing faculty, and was under the supervision of the Regents of the University of New York State, and that I did not consider it any more a private institution than the school of which he was a professor. The conversation then turned on the course of studies, which appeared to be fuller than he thought they were, but he considered a two years' time was too short. I said that was a fact we were well aware of, and that it would not be long before the term would be three years, in fact Harvard's and Pennsylvania's terms were now three years. I asked him about what percentage of the students were not allowed to graduate last year, and he said it was about fifty per cent. I informed him that the American had plucked thirty per cent. of her last year's class, which seemed to surprise him. He said at a late meeting of the Board of the Royal College he had introduced a motion to the effect that no allowance should be made to graduates of foreign or colonial schools, because he considered their standard of education so low, but it was voted down. I said I was pleased it was, and that I considered he did a great injustice to schools that were only in their infancy, and in no place more than America would he find a greater desire to increase generally the standard of veterinary education. I said the United States Veterinary Medical Association had lately appointed a standing committee, composed of members who had graduated from the different American and Canadian schools, with a view of seeing whether or not a general standard could not be adopted, and it was hoped some good would result from their labors. I reminded him of the fact that, although the veterinary profession had been in existence in England for several centuries, and had only within the last few years succeeded in getting legislative recognition; and that in France the veterinary profession was to the present day not legally recognized; whereas it had not seen one generation in America and was now protected by law in several States, and that a law had recently been passed in New York State. He said he had not heard of it, and asked the nature of the Act passed lately, and, after stating what it was, he said he considered it a better law in some respect to the one they had, inasmuch that

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it prevented any one from *accepting* "any fee or reward," whereas their's simply prohibited any one from assuming the title of veterinary surgeon. I spoke of the idea I, with many others, had of the formation of a National Examining Board, who should examine the graduating students from the different schools, and whose diploma should be the only one recognized. This, he agreed, would be a grand idea.

After further conversation, I asked him which of the two countries did he consider had made the greater progress in veterinary science during the last ten or twenty years, and I was met by the frank and ready reply that he considered we had, supplementing that by saying we were fast catching up to them, and, no doubt, would soon pass them. I need hardly say that I expressed my satisfaction at having given him a better impression of American veterinarians than he at first seemed to have. While afterwards in company with Profs. Fleming and Pemberthy the above conversation was referred to, and the opinion expressed by Prof. Ax was endorsed. Prof. Fleming particularly referred to the Act lately passed in this State, having seen it in the **AMERICAN VETERINARY REVIEW**, saying it compared very favorably with their's, and among many other things, referred to the work of the Animal Industry Bureau, and the investigations made by Dr. Salmon, expressing himself that hog cholera and rouget were two different diseases, and in many ways showed he was taking a lively interest in us. I afterwards had the pleasure of dining with Dr. Fleming and his family, spending a most enjoyable evening, but even here his enthusiasm led us into veterinary matters again. He spoke with considerable feeling of the army veterinary service, giving me a very interesting account of its workings, and expressing himself willing, were he a young man, of entering the service again, considering it a fine field for a young member of the profession, pointing with pride to the moral and social standing of the English army veterinarian. I was obliged to acknowledge that there was an exactly opposite condition of affairs in what little army service there was in America, in fact, having to admit that it was a disgrace to the country; a fact, after he had been informed how things stood, he agreed in. He

said he often received letters from this side, and handed me one he had just got, asking me to read it, as he could hardly make out what the writer wanted. It was from a party in the Western States, stating he was a veterinary surgeon, "bourne" in the year 18—; in short wanted to become a member of the Royal College. The letter throughout was of the Artemus Ward style, and would have done that gentleman credit. Is it to be wondered that when such literary stars herald themselves abroad as American veterinary surgeons that so low an opinion is formed of them? But, thank the Lord, the death knell of such is now being heard throughout this country. I guess I had better stop, or I shall (as I feel at the present moment I could) require the whole of this month's REVIEW in dilating upon the subject in hand. In conclusion, I would say that I asked Dr. Fleming when we might expect him to pay us a visit, and he said he really had an idea of doing so in two or three years. I said there was one thing I was sure he would find among American veterinarians, and that was a hearty welcome.

Yours, very truly,

W. H. PENDRY.

CALL FOR A CATTLE GROWERS' CONVENTION.

Publ. Am. Vet. Review, New York City, N. Y.:

GENTLEMEN—At a joint meeting of the executive boards of the National Cattle-Growers' Association of America and the National Cattle and Horse-Growers' Association of the United States, held at the Leland Hotel, Springfield, Ill., Wednesday, Sept. 15th, the following resolution was unanimously adopted :

Resolved. That the President and Secretaries of the National Cattle-Growers' Association of America and the National Cattle and Horse-Growers' Association of the United States be and are hereby instructed to invite all Cattle-Growers' Associations, State and National Departments or Boards of Agriculture, the Governors of States and Territories, State or Territorial Live Stock Commissions, Agricultural Colleges, Live-Stock Exchanges, Agricultural Experimental Stations, and all associations whatsoever in any manner interested in promoting the interests of the cattle industry of the United States, to appoint two delegates each, and

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all live stock and agricultural publications to appoint one delegate each, to participate in a Convention of Cattle Growers to meet with and under the auspices of the Consolidated Cattle-Growers' Association of the United States, at Chicago, Ill., Tuesday and Wednesday, the 16th and 17th of November next.

In accordance with the above, you are earnestly requested to prepare proper credentials and designate delegates to attend this convention, which will be held in the *Call Board hall* of the *Chicago Board of Trade*, beginning at 1 p. m. Tuesday, Nov. 16th, and continuing throughout Wednesday, the 17th, or until such time as the important business to come before the convention shall have been despatched. Representation in this convention, as you will understand from the above resolution, is not based upon membership in either of the two existing national associations, as the meeting is designed to reflect every shade of opinion throughout the entire United States of America; and as matters of the most serious possible import to the cattle-growing industry of the nation are demanding prompt and most careful consideration at this juncture, your earnest co-operation is sincerely desired.

The lapse of time makes it more and more apparent that until the cattle-growers of the entire Republic combine in one powerful central organization, the most vital interests of the entire body will be neglected and their industry left on the one hand at the mercy of contagious plagues, or hampered and restricted on the other by an interminable system of local quarantines. If any doubt has heretofore existed as to the justice of the claims of cattle-growers for protection at the hands of the Federal Government from the dangers of contagious disease, the late outbreak of pleuro-pneumonia near the very heart of the cattle trade, the city of Chicago, and the absence of any competent authority empowering either State or National officials to deal with the disease even at the very threshold of the greatest cattle market of the world, the vexatious local quarantines immediately proclaimed, and the inestimable damage resulting to the entire cattle interest therefrom, must compel the undivided attention of the cattle-growers of the United States, as a purely business proposition,

to the *immediate* and *urgent necessity* for adequate national laws to shield us from the ruinous experiences of Continental Europe, Great Britain, South Africa and Australia. The emergency which now exists as a direct result of the deplorable negligence of Congress in failing to provide proper means for dealing with disease, is one of the gravest that our industry has ever yet been called upon to face, and the occasion calls for a convention that shall give thoughtful and earnest consideration to this burning question, and whose deliberations shall compel attention and command universal respect.

The food supply of the nation must be preserved from the taint of all infectious plagues, and the cattle-raising industry clothed with that protection which its importance in our national economy demands. The orders of foreign governments requiring our cattle to be slaughtered upon landing at their docks, must be revoked by the submission of a bill of health so clean in every particular as to place our exports above and beyond the slightest breath of all suspicion. Our work therefore appeals for the encouragement and generous support of every owner of cattle in the land, and the exigencies of the case are such as to call for the best thought, the wisest counsel, and the active assistance of our strongest men in every State and Territory. We trust that you will favor us with delegates who appreciate the gravity of the situation, and who will aid by their presence in contributing something towards lifting the cloud of depression that now hangs over the cattle industry of our common country.

A programme is being arranged which will include addresses upon questions of vital importance to the cattle-growing industry by well-known cattle men and statesmen of America and Great Britain, upon which general discussion will be invited. All railroads centering in Chicago will grant reduced rates of fare to visitors at the great American Fat Stock Show, which will be held November 8th to 19th, and as all delegates will be interested in that exhibition, advantage of this reduction may be taken.

We enclose blank credentials for delegates, and beg to ask that you give the matter your earliest convenient attention, ad-

vising us
addressed

D. W. SMITH
H. H. METCALF
JOHN N. SIMPSON
THOS. B. PRUITT
JOHN T. LYNN
H. O. HARKER
N. H. A. MUNSON
H. M. MUNSON
L. K. SCOFFIN
Executive Committee
the Harvard University

D. W. SMITH
THOS. STURGE
GRANVILLE SMITH
JOHN CLAY,
J. M. CARY,
THOS. B. WILSON,
T. C. ANDERSON,
N. M. CURTIS,
C. M. CULBETTER,
L. N. BONHOMME

Editor A
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vising us promptly of your action, as per blank notice and addressed envelope enclosed.

Respectfully submitted.

D. W. SMITH, Bates, Ill.
 H. H. METCALF, River Bend, Colo.
 JOHN N. SIMPSON, Dallas, Tex.
 THOS. B. PRICE, Brownsville, Mo.
 JOHN T. LYTHE, Lytle, Texas.
 H. O. HARKNESS, McCammon, Idaho.
 N. H. A. MASON, San Francisco, Cal.
 H. M. MUNDY, El Paso, Texas.
 L. K. SCOFIELD, Ft. Scott, Kansas.

ELMER WASHBURN, Chicago, Ill.
 THOS. BRADLEY, Philadelphia, Pa.
 ROBERT MILLER, West Liberty, Iowa.
 W. T. THORNTON, Santa Fe, New Mexico.
 GEN. P. PORTER, Muskogee, Ind. Ter.
 A. T. ATWATER, St. Louis, Mo.
 S. P. CUNNINGHAM, Ft. Worth, Texas.

Executive Committee of the National Horse and Cattle-Growers' Association of the United States.

D. W. SMITH, Bates, Ill.
 THOS. STURGIS, Cheyenne, Wyo.
 GRANVILLE STAURT, Ft. Maginnis, Mont.
 JOHN CLAY, Jr., Chicago, Ill.
 J. M. CARY, Cheyenne, Wyo.
 THOS. B. WALES, Jr., Iowa City, Ia.
 T. C. ANDERSON, Side View, Ky.
 N. M. CURTIS, Ogdensburg, N. Y.
 C. M. CULBERTSON, Chicago, Ill.
 L. N. BONHAM, Oxford, Ohio.

W. A. TOWERS, Kansas City, Mo.
 G. W. SIMPSON, Boston, Mass.
 ADAMS EARL, Lafayette, Ind.
 J. C. SIBLEY, Franklin, Pa.
 A. W. WOODFORD, Weston, W. Va.
 T. ALEX. SETH, Baltimore, Md.
 EDWIN PHELPS, Pontiac, Mich.
 R. C. JUDSON, Farmington, Minn.
 THEO. DAVID, Mitchell, Dak.
 ALVIN H. SANDERS, Chicago, Ill.

Executive Committee of the National Cattle-Growers' Association of America.

AN EXAMPLE WORTH FOLLOWING.

Editor American Veterinary Review:—

SIR: I have the pleasure of enclosing you a copy made from the report of Clement Stephenson, F.R.C.V.S., of September, '85. I am indebted for this to John W. Gadsden, M.R.C.V.S., of Philadelphia. As you well know, there is no more earnest, indefatigable worker than he on the subject of contagious pleuro-pneumonia. I can heartily endorse his opinion, *i. e.*, that so-called "recovered cases" are dangerous, as I have seen proof that such animals have conveyed the disease to other cattle miles from any infected centre.

Yours, &c.,

CH. B. MICHENNER.

GRADUATE OPEN FOR AN ENGAGEMENT.

NEW YORK, Oct. 14.

PROF. A. F. LIAUTARD:—Kindly insert following in next issue of REVIEW and oblige. A graduate of 1886 is open for any reasonable offer. Will go wherever there is money and prospects good.

Address

VETERINARIAN,

Brooklyn Post Office.

COCAINE IN NEUROTOMY.

BRYN MAWR, Pa., Oct. 23d, 1886.

Editor American Veterinary Review:—

I would like to report the use of cocaine as an anæsthetic in the operation for neurotomy. I injected about 30 m. under the skin over the part where the incision was to be made. In five minutes time a clear cut was made and the nerve exposed. I grasped it with, and rolled it between, my fingers without the animal evincing the slightest pain; even when the nerve was cut he did not make the slightest movement; by which I was led to believe he did not feel it. The wound healed much quicker than similar wounds without the cocaine.

CHARLES T. GOENTNER.

SOCIETY MEETINGS.

NEW YORK STATE VETERINARY SOCIETY.

The regular monthly meeting of the New York State Veterinary Society was held on Tuesday evening, in the lecture room of the American Veterinary College, Dr. Robertson in the chair.

Minutes of last meeting were read and, on motion, were adopted without alteration.

Dr. Pendry then read a paper on Catarrhal Influenza, in which he gave the symptoms of simple influenza and those cases that he considered should come under the heading he used. He took exception to the general term influenza, contending that it was too vague, and he thought was too often used to cover up

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the ignorance of a more specific knowledge of the malady we were called upon to treat. He held that what was generally classed as influenza assumed several distinct types of a febrile disease, which should be more generally recognized; and spoke of cases that he had been lately treating, giving the symptoms and treatment he was following. In reference to the difference of opinion as to the cause and contagiousness of the disease, he said he was inclined to believe that the type he had referred to was contagious.

In the discussion that followed, Dr. L. McLean held that it was a specific disease, and that there were two distinct types of influenza, one sporadic, the other epizootic, with quite a distinction in the symptoms, and due to different causes. Dr. R. A. Findlay said he had noticed that the disease often followed the introduction of new stock into a stable where the best of attention was given to hygienic measures. He had seen such cases as described by the essayist, where the nasal discharge was very purulent, and considered it was contagious. Dr. Charum agreed that a more specific term should be used than simply influenza. Dr. Robertson referred to the general outbreak in 1872, when so many horses in many different places became affected at the same time, which, he thought, rather did away with the idea of the disease being contagious. Dr. Ogle agreed with this, giving as his reason that during that time he had two horses in a stable, where all the horses were affected, that never became affected. Dr. Waters considered the cause was atmospherical.

The essayist stated that in one stable where seven out of seventeen were affected, he had been instructed to place the remaining ten horses under any treatment that he thought would help to ward off the disease, and had placed them under iodide of potash and sulphate of quinine, and had as yet seen no symptoms of the disease in those thus treated.

A vote of thanks was extended to the essayist for his paper.

The motion of alteration of the by-laws altering the meetings to quarterly, instead of monthly, was taken up and, on motion of Dr. L. McLean, seconded by Dr. R. A. Finlay, the change was made, and on a motion of Dr. Pendry to go into effect after the next annual meeting.

On motion the names of Dance, Sutliffe and N. F. Thompson were dropped from the roll for non-payment of dues.

The names of —— Harris, V.S., New York, and Wm. Machan, V.S., New York, were proposed for membership, and referred to the Board of Censors.

Meeting then adjourned to the second Tuesday in November.

KEYSTONE VETERINARY MEDICAL ASSOCIATION.

The fourth annual meeting of the Keystone Veterinary Medical Association was held in the lecture room of the Veterinary Department of the University of Pennsylvania, 36th and Pine streets, October 2, 1886, Vice-President, Dr. Rodgers in the chair.

After the reading and adoption of the minutes of the previous meeting, the Committee on Credentials reported favorably on the proposition of Dr. Henri Formod (coroner's physician). The report was excepted and the committee discharged.

The Committee on Ethics, consisting of Drs. Thos. B. Rodgers, W. J. Rayner and W. L. Zuill, made the following report :

Your Committee on Ethics, in obedience to instructions they have received, have endeavored to perform their duties in this direction without prejudice or favor : 1st.—That the making of a contract with any person or company is not a violation of the code of ethics adopted by this Association. 2nd.—That the fulfilling of the terms of contract may be in direct violation of our code. 3d.—That the making and carrying out of the contract under consideration is judged by us (in view of the evidence which we have received in consultation with friends in the medical profession) to be a violation of our code, and that its terms cannot be carried out without conflicting with sections 2, 5 and 6 of our code. (Signed by the Committee.)

On motion, the report was received and committee discharged.

Treasurer reported a balance in the treasury of \$42.22.

The amendment to the by-laws offered by Dr. Huidekoper, that all committees report in writing, was adopted and became a law.

Dr. Henri Formod was elected a member of the Association.

Dr. Huidekoper spoke of the use of cocaine as a local anæsthetic in minor surgery. He had used it in trephining nasal sinus, punctured wounds of the feet and operation on quittor; also to produce insensibility before cauterizing the tail after docking. The mode of applying was to inject 3 ss. of the 4 per cent. solution five or ten minutes before operating. In every case the happiest results were attained; healing followed very rapidly.

Dr. Rodgers suggested the use of cocaine in castration.

The subject of casting to castrate was discussed, and approved by every member present.

The following officers were elected for the ensuing year : President, Prof. R. S. Huidekoper; Vice-President, Dr. Alexander Glass; Secretary and Treasurer, Dr. Chas. T. Goentner; Directors, Drs. Thos. B. Rodgers, W. L. Zuill, W. H. Hoskins, J. B. Rayner and W. B. E. Miller.

Dr. J. B. Rayner was appointed to conduct the newly elected President to the chair. Prof. Huidekoper made a few remarks, thanking the Association for the honor of being chosen presiding officer, and hoped the Association would be a success; he said the profession did not need elevating, but a great many of its membnrs did.

Dr. W. S. Kooker made application for associate membership; he was elected for the ensuing year.

Dr. Rodgers said it did him good to look back to the organizing of this Association four years ago. Then he was compelled to consult with quacks of the lowest order; now he had the pleasure of consultation and association with men educated in thieir calling.

The discussion for next meeting, November 6, 1886, will be the law regulating the practice of veterinary medicine and surgery.

CHAS. T. GOENTNER,
Secretary.